KPDES

KENTUCKY POLLUTANT DISCHARGE ELIMINATION SYSTEM

FACT SHEET

General Permit For

Mineral Mining and On-Site Processing Activities

KPDES No.: KYG840000

AI No.: 35050

Date: February 28, 2020

Public Notice Information

Public Notice Start Date: November 26, 2019

Comment Due Date: December 26, 2019

General information concerning the public notice process may be obtained on the Division of Water's Public Notice Webpage at the following address: https://eec.ky.gov/Environmental-Protection/Pages/public-notices.aspx.

Public Notice Comments
Comments must be received by the Division of Water no later than 4:30 PM on the closing date of the comment period. Comments may be submitted by e-mail at: DOWPublicNotice@ky.gov or written comments may be submitted to the Division of Water at 300 Sower Blvd, Frankfort, Kentucky 40601.

Reference Documents
A copy of this proposed fact sheet, proposed permit, the application, other supporting material and the current status of the application may be obtained from the Department for Environmental Protection's Pending Approvals Search Webpage:
http://dep.gateway.ky.gov/eSearch/Search_Pending_Approvals.aspx?Program=Wastewater&NumDaysDoc=30.

Open Records

Copies of publicly-available documents supporting this fact sheet and proposed permit may also be obtained from the Department for Environmental Protection Central Office. Information regarding these materials may be obtained from the Open Records Coordinator at (502) 782-6849 or by e-mail at EEC.KORA@ky.gov.

DEPARTMENT FOR ENVIRONMENTAL PROTECTION
Division of Water, 300 Sower Blvd, Frankfort, Kentucky 40601

THIS KPDES FACT SHEET CONSISTS OF THE FOLLOWING SECTIONS:

SECTION 1

FACILITIES COVERED

1. FACILITIES COVERED

Those facilities covered include establishments engaged in the extraction of mineral natural resources and the on-site processing of such minerals within the physical and political boundaries of the Commonwealth of Kentucky. Mineral mining operations include:

1) Mining of limestone and dolomite;
2) Mining of sand and gravel;
3) Dredging of river or creek sand and gravel;
4) Mining of clay;
5) Mining of rock asphalt; and
6) Mining of fluorspar and other vein minerals.

On-site processing activities include:

1) Classifying, crushing, sizing, and washing of the mined mineral;
2) Hot mix asphalt plants; and
3) Concrete ready-mix plants.

1.1. Eligibility

Only those mineral mining operations that have obtained a Surface Disturbance Mining Permit (SDMP) from the Division of Mine Reclamation and Enforcement (DMRE) or are in the process of obtaining a SDMP are eligible for coverage under this version of KYG840000 (KYG84). Hot mix asphalt plants and concrete ready-mix plants within the approved permit area of the SDMP and operated by the mineral mining permit holder, do not require separate Kentucky Pollutant Discharge Elimination System (KPDES) permits.

1.2. Exclusions

The following are excluded from coverage under this general permit:

1) Coal mining and processing activities;
2) Oil shale mining and processing activities;
3) Tar sand mining and processing activities;
4) Mineral mining and processing activities that discharge to or propose to discharge to a receiving water body that has been categorized as an “Impaired Water” for a pollutant or pollutants of concern that maybe associated with the mineral mining activity and for which an approved Total Maximum Daily Load (TMDL) has been developed;
5) Mineral mining and processing activities that discharge to or propose to discharge to a receiving water body that has been designated as a Coldwater Aquatic Habitat (CAH) as listed in Table C of 401 KAR 10:026, Section 5 Table C;
6) Mineral mining and processing activities that discharge to or propose to discharge to a receiving water body that has been designated as an Outstanding State Resource Water (OSRW) as listed in Table C of 401 KAR 10:026, Section 5 Table C;
7) Mineral mining and processing activities that discharge to or propose to discharge to a receiving water body that has been classified as an Outstanding National Resource Water (ONRW) or as an Exceptional Waters (EW) as listed in 401 KAR 10:030, Section 1 Table 1;
8) Offsite hot mix asphalt plants;
9) Offsite concrete ready-mix plants;
10) Any operation that disposes of solid or special wastes within the mining area; and
11) Mineral mining and processing activities that the Division of Water (DOW) has determined would be more appropriately addressed by an individual permit or an alternate general permit.

1.3. Location

Mineral Mining operations within the 120 counties of the Commonwealth of Kentucky.

1.4. Treatment Provided

The treatment provided is specific to the facility and is dependent upon the volume of discharge and sources of potential contamination. The minimum treatment required by the SDMP for mineral mining activities is sedimentation.

1.5. Permitting Action

This is a reissuance of a general KPDES permit to address non-coal (mineral) mining and associated activities conducted in the Commonwealth of Kentucky.

SECTION 2

RECEIVING WATER INFORMATION

2. RECEIVING / INTAKE WATERS

2.1. Receiving Waters

Those water bodies of the Commonwealth that comprise the Mississippi and Ohio River basins and sub-basins within the political and geographic boundaries of Kentucky.

2.2. Stream Segment Use Classifications

Includes all water bodies that have been designated by DOW singularly or in combination thereof as: Warmwater Aquatic Habitat, Primary Contact Recreation, Secondary Contact Recreation, and/or Domestic Water Supply.

2.3. Stream Segment Antidegradation Categorization

Included are those water bodies which have been categorized as High Quality Waters, and Impaired Waters.

2.4. Stream Low Flow Condition

The 7-day, 10-year low flow conditions of the receiving streams can range from zero (0) cubic feet per second (cfs) to 111,000 cfs for the Mississippi River.

SECTION 3

EFFLUENT REQUIREMENTS

3. EFFLUENT REQUIREMENTS

The effluent requirements are divided into the following categories:

1) Controlled mine dewatering,
2) Non-controlled precipitation influenced mine dewatering, and
3) Process wastewaters

Controlled mine dewatering is water that is impounded or that collects in the mine and is pumped, drained or otherwise removed from the mine through the efforts of the mine operator.

Non-controlled precipitation influenced mine dewatering is the discharge of water from the active mining area that occurs independent of the efforts of the mine operator. Such discharges may occur in response to a specific precipitation event or the accumulation of precipitation from several events.

Process wastewater means any water used in the slurry transport of mined material, air emissions control, concrete truck washout, or other processing exclusive of mining. Process wastewaters also include any other water which becomes commingled with such wastewater in a pit, pond, lagoon, mine or other facility used for treatment of such wastewater, but does not include wastewater used for the suction dredging of deposits in a body of water and returned directly to the body of water without being used for other purposes or combined with other wastewater.

3.1. Mine Dewatering

The following effluent limitations and monitoring requirements are imposed on discharges from any KPDES Outfall that receives drainage from controlled mine dewatering from mineral mining operations as defined above.

Table 1. CONTROLLED MINE DEWATERING

Effluent Characteristic	Units	Reported Discharge Values				Effluent Limitations				Monitoring Requirements	
		Min	Monthly Average	Daily Maximum	Max	Min	Monthly Average	Daily Maximum	Max	Frequency	Sample Type
Flow	MGD	N/A	Varies	Varies	N/A	N/A	Report	Report	N/A	2/Month	Instantaneous
Total Suspended Solids	mg/l	N/A	12.96	24.6	N/A	N/A	35	70	N/A	2/Month	Grab
pH	SU	7.55	N/A	N/A	7.64	6.0	N/A	N/A	9.0	2/Month	Grab
Oil & Grease	mg/l	N/A	1.27	1.3	N/A	N/A	10	15	N/A	1/Month	Grab
N/A means Not Applicable.											

The following effluent limitations and monitoring requirements are imposed on discharges from any KPDES Outfall that receives drainage from non-controlled precipitation influenced mine dewatering from mineral mining operations as defined above.

Table 2. NON-CONTROLLED MINE DEWATERING											
Effluent Characteristic	Units	Reported Discharge Values				Effluent Limitations				Monitoring Requirements	
		Min	Monthly Average	Daily Maximum	Max	Min	Monthly Average	Daily Maximum	Max	Frequency	Frequency
Flow	MGD	N/A	Varies	Varies	N/A	N/A	Report	Report	N/A	2/Month	Instantaneous
Precipitation Volume	Inches	N/A	Varies	Varies	N/A	N/A	Report	Report	N/A	2/Month	Grab
Settleable Solids	ml/l	N/A	0.064	0.071	N/A	N/A	Report	0.5	N/A	2/Month	Grab
pH	SU	7.55	N/A	N/A	7.64	6.0	N/A	N/A	9.0	2/Month	Grab
Oil & Grease	mg/l	N/A	1.27	1.3	N/A	N/A	10	15	N/A	1/Month	Grab

3.2. Process Wastewaters

There shall be no discharge of process wastewaters from Hot Mix Plants.

There shall be no discharge of process wastewaters from concrete ready-mix plants or mineral mining operations except when the permittee recycles the process wastewaters to the maximum extent practicable (MEP). Such discharges are subject to the requirements in Table 1. Outfalls that do not practice recycling to the MEP shall not discharge process wastewaters. No concrete washout material may be directly discharged into waters of the Commonwealth without going through treatment. Excess concrete is to be disposed of in designated concrete washout areas only.

3.3. Dredge Return Water

Dredge return water from a sand dredging operation shall be returned to the dredge pit and not discharged to other surface waters of the Commonwealth.

3.4. Uncontaminated Stormwater Runoff

Stormwater runoff from undisturbed areas of the mineral mining operation shall be addressed under the Best Management Practices (BMP) Plan required in Section 3 of this permit.

3.5. Asphalt Additives and Concrete Admixtures

There shall be no detectable quantities found using the most sensitive analytical methods, of any asphalt additive or concrete admixture in any discharge from the permitted facility. The preventive measures taken by the permit to insure that no such discharge occurs shall be documented in the BMP Plan for the facility.

SECTION 4

JUSTIFICATION OF REQUIREMENTS

4. JUSTIFICATION OF REQUIREMENTS

4.1. General

Pursuant to 401 KAR 5:050, Section 4 [40 CFR 122.48 (b)] all permits shall specify required monitoring including type, intervals, and frequency sufficient to yield data which are representative of the monitored activity.

Pursuant to 401 KAR 5:065, Section 2(4) [40 CFR 122.44(a)] all permits shall contain technology-based effluent limitations.

Pursuant to 401 KAR 5:065, Section 2(4) [40 CFR 122.44(d)] permits shall contain water quality-based effluent limitations when necessary to achieve water quality standards. In determining if such effluent limitations are necessary, DOW must determine if a discharge has reasonable potential to cause or contribute to an in-stream excursion above a narrative or numeric state water quality standard. DOW's reasonable potential analysis procedures are detailed in the DOW document entitled "General Procedures for Limitations and Requirements Development". The procedures outlined in this document are consistent with the requirements of 401 KAR 5:065, Section 2(4) [40 CFR 122.44(d)(1)(ii)] and require DOW to account for existing controls on point and nonpoint sources of pollution, the variability of the pollutant or pollutant parameter in the effluent, the sensitivity of the species to toxicity testing, and where appropriate, the dilution of the effluent in the receiving water.

Pursuant to 401 KAR 5:065, Section 2(4) [40 CFR 122.44(k)(3) & (4)] permits shall contain BMPs to control or abate the discharge of pollutants when numeric effluent limitations are infeasible or when necessary to achieve effluent limitations or carry out the purpose and intent of the Clean Water Act (CWA).

Pursuant to 401 KAR 5:065, Section 2(4) [40 CFR 122.44(l)] all reissued permits shall contain technology-based effluent limitations as stringently imposed in the previous permit.

4.2. No Discharge of Process Wastewaters

The effluent limitation guidelines (ELGs) for non-coal mineral mining and processing under 40 CFR 436 do not allow for the discharge of process wastewaters with the exception of crushed stone and construction sand and gravel. For these two categories, the ELGs allow for the discharge of process wastewater with the condition that the permittee recycles the water. The effluent guideline does not speak to this condition for other categories. In the opinion of DOW, the processing of limestone, dolomite, sand and gravel, clay, rock asphalt, fluorspar and other vein minerals is sufficiently similar to those of crushed stone and sand and gravel that the condition allowing for the discharge of process wastewater when the permittee recycles the process wastewater should apply to all categories. This requirement is consistent with the requirements of 401 KAR 5:065; Section 2(9) [40 CFR 436].

The application of the no discharge requirement for process wastewaters from Hot Mix Plants is consistent with 401 KAR 5:065, Section 2(9)[40 CFR 443].

Ready-Mix Concrete plants currently do not have a promulgated ELG for process wastewaters. EPA published a draft ELG for the concrete products industry, however in "Development Document for Effluent Limitations Guidelines and Performance Standards Concrete Products Industries", EPA made recommendations for Best Available Technology Economically Achievable (BAT) requirements; Best Practicable Control Technology (BPT) requirements; and New Source Performance Standards (NSPS) requirements. The recommended BAT and NSPS requirements are no discharge of process wastewater pollutants with the best available control technologies being listed as:

1) Settling in ponds, basins, tanks or mechanical clarification equipment,
2) Recycle for use as truck washout,

3) Recycle for partial use as mix water, and
4) Total containment.

DOW used these recommendations to develop DOWs Best Professional Judgment (BPJ) determination of the BAT and BPT requirements for process wastewaters from Concrete Ready-Mix plants of no discharge of process wastewaters except when operating a wastewater recycle system. This requirement is consistent with the requirements of 40 CFR 125.3(c)(2) as incorporated by 401 KAR 5:080, Section 2(3).

4.3. Mine Dewatering

The application of these requirements is to cover precipitation induced wastewaters. Currently, the mineral mining ELG in 40 CFR 436 allows for the discharge of mine dewatering wastewaters for categories such as crushed stone and sand and gravel, but does not address mine dewatering for all subcategories. The ELG for hot mix asphalt plants in 40 CFR 443 does not address non-process wastewaters.

4.3.1. Flow

The monitoring requirements for this parameter are consistent with the requirements of 401 KAR 5:065, Section 2(4) [40 CFR 122.44(i)(1)(ii)].

4.3.2. Total Suspended Solids

The limitations and requirements for this parameter are consistent with the requirements of 401 KAR 5:080, Section 2(3) [40 CFR 125.3]. This limit is representative of the DOWs BPJ determination of the BAT and BPT requirements for controlled discharges. DOW based its determination on 40 CFR 434 Coal Mining Effluent Guidelines. The mining methods and wastewater treatment for mineral mining are sufficiently similar to those for coal mining that application of this requirement is appropriate.

4.3.3. pH

The limitations for pH are consistent with requirements of 401 KAR 5:065, Section 2(9) [40 CFR 436] and the state water quality standards as established in 401 KAR 10:031, Section 4.

4.3.4. Precipitation Volume

The monitoring requirements for this parameter are consistent with the requirements of 401 KAR 5:065, Section 2(4) [40 CFR 122.44]. Monitoring and reporting of precipitation volume is a conditional requirement that applies when the permittee is seeking alternate precipitation effluent limitations for a specific discharge event. The precipitation volume along with the type of drainage received by the sediment control structure determines eligibility.

4.3.5. Settleable Solids

The limitations for this parameter are consistent with the requirements of 401 KAR 5:080, Section 2(3) [40 CFR 125.3]. These limitations are representative of the DOWs BPJ determination of the BPT and BAT requirements for non-controlled precipitation influenced discharges. DOW based its determination on the requirements for precipitation events in the Coal Mining Effluent Guidelines, 40 CFR Part 434.63. The mining methods and wastewater treatment for clay, fluorspar, and other vein minerals are sufficiently similar to those for coal mining that application of this requirement is appropriate.

4.3.6. Oil & Grease

The limitation for this parameter is consistent with the requirements of 40 CFR 125.3 as incorporated by 401 KAR 5:080, Section 2(3) and represents the DOW’s BPJ determination of BAT and BPT requirements.

SECTION 5

SCHEDULE OF COMPLIANCE
AND
OTHER CONDITIONS

5. SCHEDULE OF COMPLIANCE AND OTHER CONDITIONS

5.1. Schedule of Compliance

The permittee will comply with all requirements by the effective date of the permit except as allowed pursuant to 401 KAR 5:050, Section 2 [40 CFR 122.47(a)].

5.2. Antidegradation

The conditions of 401 KAR 10:029, Section 1 have been satisfied. In accordance with 401 KAR 10:030, Section 1(3)(b)(2), DOW is requiring new and expanded operations to submit with the eNOI a Socioeconomic Demonstration and Alternatives Analysis (SDAA). It is the practice of DOW to public notice the acceptance of a SDAA for a period of 15 days to meet the public participation requirements of 401 KAR 10:029, Section 1(2).

For those discharges subject to the provisions of 401 KAR 10:030 Section 1(3)(b)5, the permittee shall install, operate, and maintain wastewater treatment facilities consistent with those identified below:

Sedimentation

5.3. Best Management Practices (BMP) Plan

In accordance with 401 KAR 5:065, Section 2(4) [40 CFR 122.44(k)], permits are to include BMPs to control or abate the discharge of pollutants when: 1) authorized under Section 304(e) of the CWA for the control of toxic pollutants and hazardous substances from ancillary industrial activities; 2) authorized under Section 402(p) of the CWA for the control of storm water discharges; 3) numeric effluent limitations are infeasible; or 4) the practices are reasonably necessary to achieve effluent limitations and standards or to carry out the purposes and intent of the CWA. Therefore the permittee is required to prepare and implement a BMP Plan to identify measures it will take to prevent discharge of pollutants.

5.4. Authorization to Discharge

The permittee is authorized to discharge under the terms of the permit, upon receipt of written notification by the DOW, and upon the issuance of a fully effective permanent program permit by DMRE.

5.5. Electronic Notice of Intent (eNOI)

The eNOI-KYG84 will provide the necessary information to enable DOW to better determine the eligibility of a facility seeking coverage under this general permit and the applicable requirements for the facility seeking coverage under this general permit. Should DOW receive an eNOI-KYG84 that upon review, DOW determines that a potential for degradation or permanent lowering of water quality could result, DOW will request additional information. DOW will base its determination on a number of factors including but not limited to the amount of disturbance within the watershed, the proximity to drinking water sources or waters not categorized as “High Quality”, size and duration of the project, etc. If, based upon review of the additional information, DOW determines that additional controls and requirements beyond those in the KYG84 general permit are needed to meet antidegradation requirements; the applicant shall be required to obtain an individual permit.

The information requirements of the eNOI are consistent with the requirements of 401 KAR 5:065, Section 2(a)1a [40 CFR 122.28].

5.6. Domestic Water Supply (DWS) Intake

In addition to the requirements of Section 2 of this permit, non-coal mining and/or processing operations that discharge within 5 miles upstream of an existing domestic water supply intake shall incorporate within the operation’s BMP Plan language addressing catastrophic releases and the notification procedures.

The language shall be included under the Specific Conditions Section of the BMP Plan and shall provide the following:

1. The criteria for determining a catastrophic release;
2. The notification method(s) to be used to inform the affected DWS intake that a catastrophic release has occurred;
3. The names, telephone numbers, and e-mail addresses of the contacts with the subject water supply; and
4. The names, telephone numbers, and e-mail addresses of the contacts with the permittee.

5.7. Outfall Signage

The KPDES permit establishes monitoring points, effluent limitations, and other conditions to address discharges from the permitted facility. As a member of the Ohio River Valley Water Sanitation Commission (ORSANCO) DOW is obligated to include language in KPDES permits authorizing discharges to the Ohio River, that notifies the permittee of the permanent marker requirements of Part V, Section A 3 of ORSANCO's Pollution Control Standards. For all other receiving waters DOW recommends the permittee place and maintain a permanent marker at each of the monitoring locations to better document and clarify these locations.

5.8. Certified Laboratory

All environmental analysis to be performed by a certified laboratory is consistent with the certified wastewater laboratory requirements 401 KAR 5:320, Section 2.

5.9. Continuation of Expiring Permit

Continuation of coverage under this permit after its expiration is consistent with the 401 KAR 5:060, Section 2(4).

5.10. Permit Duration

The permit shall have a duration of five (5) years from the effective date unless modified or reissued.